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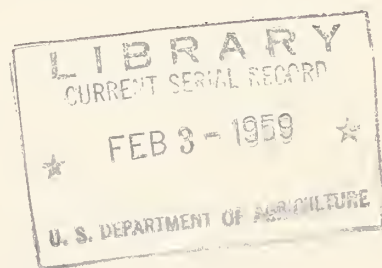
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UNITED STATES DEPARTMENT OF AGRICULTURE  
Agricultural Marketing Service  
Cotton Division  
Washington, D.C.

COTTON FIBER AND PROCESSING TEST RESULTS  
CROP OF 1958



## COTTON FIBER AND PROCESSING TEST RESULTS

Results of 1958-crop cotton through January 9, 1959 continues to show improvement over 1957 in nonlint content and picker and card waste (table 1). Average number of neps per 100 square inches of card web is somewhat higher than last year in the Southeastern and South Central areas and lower in the Southwestern and Western areas. Yarn appearance grades are approximately one-half grade lower than the 1957 average in all areas except in the Southeastern area where the average yarn appearance index is almost the same as last year. Skein strength of 22s yarn is considerably higher than last year's average in the Southeastern area and slightly lower in the other cotton producing areas. For the crop as a whole, yarn strength is averaging 115 pounds for 22s yarn, the same as in 1957.

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Prepared in the Standards and Testing Branch, AMS

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points tested through January 9, 1957-1958 1/

| Item                                | Southeastern |      |      | South Central |      |      | Southwestern |      |      | Western |      |      | U.S.Average |      |      |
|-------------------------------------|--------------|------|------|---------------|------|------|--------------|------|------|---------|------|------|-------------|------|------|
|                                     | 1957         | 1958 | 1957 | 1957          | 1958 | 1957 | 1957         | 1958 | 1957 | 1957    | 1958 | 1957 | 1957        | 1958 | 1958 |
| Fineness (Micronaire)-----reading:  | 4.2          | 4.1  | 4.4  | 4.3           | 4.3  | 4.1  | 4.3          | 4.3  | 4.1  | 4.3     | 4.3  | 4.2  | 4.2         | 4.2  | 4.2  |
| Maturity (Causticaire)-----index:   | 78           | 77   | 79   | 78            | 78   | 71   | 78           | 78   | 77   | 78      | 78   | 75   | 78          | 78   | 78   |
| Fiber strength (Pressley)1,000 psi: | 80           | 79   | 78   | 78            | 78   | 80   | 80           | 80   | 87   | 88      | 88   | 81   | 81          | 81   | 81   |
| Nonlint content-----percent:        | 3.4          | 2.5  | 3.3  | 2.7           | 2.7  | 3.4  | 2.7          | 2.7  | 2.7  | 2.5     | 2.5  | 3.2  | 3.2         | 2.6  | 2.6  |
| Picker and card waste-----percent:  | 8.4          | 7.6  | 8.8  | 7.7           | 7.8  | 11.2 | 7.8          | 7.8  | 9.6  | 7.4     | 7.4  | 9.7  | 9.7         | 7.7  | 7.7  |
| Neps---per 100 sq. in. of card web: | 16           | 20   | 12   | 14            | 14   | 16   | 14           | 14   | 18   | 15      | 15   | 15   | 15          | 16   | 16   |
| Strength of 22s yarn-----pounds:    | 110          | 115  | 113  | 111           | 111  | 113  | 111          | 111  | 131  | 129     | 129  | 115  | 115         | 115  | 115  |
| Average yarn appearance-----index:  | 102          | 101  | 100  | 94            | 94   | 101  | 96           | 96   | 94   | 92      | 92   | 100  | 100         | 96   | 96   |
| Number lots to date-----            | 74           | 107  | 104  | 123           | 123  | 140  | 123          | 123  | 66   | 78      | 78   | 384  | 384         | 431  | 431  |

1/ Based on a limited number of samples of modal quality from selected gin points in the United States.

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958

| Variety                               | Acala 4-42   | Acala WR-44 |
|---------------------------------------|--------------|-------------|
| State                                 | Arizona      | California  |
| Market area                           | Queen Creek* | Thermal     |
| Percentage of variety at gin          | 55*          | 100         |
| Period of harvest                     | Late         | Late        |
| <b>RAW COTTON QUALITY</b>             |              |             |
| Classification (official standards):  |              |             |
| Grade-----designation:                | M            | SIM+        |
| Staple length-----inches:             | 1-1/32       | 1-1/32      |
| Fiber length (Fibrograph):            |              |             |
| Upper half mean-----inches:           | 1.04         | 1.04        |
| Uniformity-----ratio:                 | 79           | 81          |
| Fiber fineness and maturity:          |              |             |
| Micronaire-----reading 1/:            | 4.6          | 4.5         |
| Fineness (Causticaire)---ug/inch 2/:  | 4.4          | 4.4         |
| Maturity ( " )-----index:             | 81           | 80          |
| Fiber tensile strength (Pressley):    |              |             |
| Zero gauge-----1,000 p.s.i.:          | 91           | 96          |
| " " -----grams per tex 3/:            | 45.0         | 47.5        |
| 1/8" " ----- " " " :                  | 24.6         | 27.2        |
| Nonlint content: 4/                   |              |             |
| Visible waste-----percent:            | 2.1          | 2.2         |
| Invisible waste----- "                | 1.0          | 0.6         |
| Total nonlint content----- "          | 3.1          | 2.8         |
| Color of raw cotton: 5/               |              |             |
| Reflectance-----Rd:                   | 78.5         | 74.7        |
| Yellowness-----+b:                    | 8.3          | 8.4         |
| Sugar content-----percent:            | 0.2          | 0.2         |
| Acid-alkaline value-----pH units 6/:  | 6.8          | 7.0         |
| <b>PROCESSING RESULTS</b>             |              |             |
| Manufacturing waste:                  |              |             |
| Picker and card-----percent:          | 6.8          | 7.7         |
| Neps-----per 100 sq. in. of card web: | 8            | 7           |
| Yarn skein strength:                  |              |             |
| 22s (26.8 tex)-----pounds:            | 132          | 136         |
| 50s (11.8 " )----- "                  | 46           | 48          |
| Average break factor-----7/:          | 2602         | 2696        |
| Yarn appearance:                      |              |             |
| 22s (26.8 tex)-----grade:             | C+           | C           |
| 50s (11.8 " )----- "                  | C            | D+          |
| Average yarn appearance----index 8/:  | 95           | 85          |

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For footnotes see page 11.

\*Samples selected from one-variety growers.

Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

|  |   |            |   |      |   |        |   |        |
|--|---|------------|---|------|---|--------|---|--------|
| Variety                                      | : | Arizona 44 |   |      |   |        |   |        |
| State  | : | Arizona    |   |      |   |        |   |        |
| Market area                                  | : | Chandler   | : | Eloy | : | Horn   | : | Parker |
| Percentage of variety at gin                 | : | 90         | : | 85   | : | 100    | : | 98     |
| Period of harvest                            | : | Late       | : | Late | : | Late   | : | Late   |
| RAW COTTON QUALITY                           |   |            |   |      |   |        |   |        |
| Classification (official standards):         | : | :          | : | :    | : | :      | : | :      |
| Grade-----designation:                       | : | SIM        | : | Msp  | : | M      | : | M      |
| Staple length-----inches:                    | : | 1-1/32     | : | 1    | : | 1-1/16 | : | 1-1/16 |
| Fiber length (Fibrograph):                   | : | :          | : | :    | : | :      | : | :      |
| Upper half mean-----inches:                  | : | 1.04       | : | 1.02 | : | 1.06   | : | 1.04   |
| Uniformity-----ratio:                        | : | 78         | : | 78   | : | 76     | : | 77     |
| Fiber fineness and maturity:                 | : | :          | : | :    | : | :      | : | :      |
| Micronaire-----reading <u>1</u> /:           | : | 4.1        | : | 3.3  | : | 4.4    | : | 4.1    |
| Fineness (Causticaire)---ug/inch <u>2</u> /: | : | 3.9        | : | 3.2  | : | 4.2    | : | 3.9    |
| Maturity ( " )-----index:                    | : | 79         | : | 72   | : | 80     | : | 78     |
| Fiber tensile strength (Pressley):           | : | :          | : | :    | : | :      | : | :      |
| Zero gauge-----1,000 p.s.i.:                 | : | 85         | : | 89   | : | 91     | : | 93     |
| " " -----grams per tex <u>3</u> /:           | : | 42.1       | : | 44.1 | : | 45.0   | : | 46.0   |
| 1/8" " ----- " " " :                         | : | 23.5       | : | 23.6 | : | 23.5   | : | 24.2   |
| Nonlint content: <u>4</u> /                  | : | :          | : | :    | : | :      | : | :      |
| Visible waste-----percent:                   | : | 3.6        | : | 2.9  | : | 1.5    | : | 1.8    |
| Invisible waste----- " :                     | : | 1.2        | : | 1.5  | : | 0.5    | : | 1.3    |
| Total nonlint content----- " :               | : | 4.8        | : | 4.4  | : | 2.0    | : | 3.1    |
| Color of raw cotton: <u>5</u> /              | : | :          | : | :    | : | :      | : | :      |
| Reflectance-----Rd:                          | : | 70.6       | : | 71.1 | : | 75.6   | : | 77.5   |
| Yellowness-----+b:                           | : | 8.8        | : | 10.9 | : | 8.9    | : | 8.7    |
| Sugar content-----percent:                   | : | 0.2        | : | 0.3  | : | 0.3    | : | 0.2    |
| Acid-alkaline value-----pH units <u>6</u> /: | : | 6.8        | : | 7.0  | : | 6.8    | : | 7.2    |
| PROCESSING RESULTS                           |   |            |   |      |   |        |   |        |
| Manufacturing waste:                         | : | :          | : | :    | : | :      | : | :      |
| Picker and card-----percent:                 | : | 9.1        | : | 8.7  | : | 7.1    | : | 7.9    |
| Neps-----per 100 sq. in. of card web:        | : | 14         | : | 45   | : | 9      | : | 10     |
| Yarn skein strength:                         | : | :          | : | :    | : | :      | : | :      |
| 22s (26.8 tex)-----pounds:                   | : | 116        | : | 128  | : | 122    | : | 123    |
| 50s (11.8 " )----- " :                       | : | 42         | : | 47   | : | 43     | : | 43     |
| Average break factor----- <u>7</u> /:        | : | 2326       | : | 2583 | : | 2417   | : | 2428   |
| Yarn appearance:                             | : | :          | : | :    | : | :      | : | :      |
| 22s (26.8 tex)-----grade:                    | : | D+         | : | D    | : | C+     | : | C+     |
| 50s (11.8 " )----- " :                       | : | BG         | : | BG   | : | C      | : | D+     |
| Average yarn appearance----index <u>8</u> /: | : | 70         | : | 65   | : | 95     | : | 90     |

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For footnotes see page 11.



Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

| Variety                                      | Arizona 44 | Deltapine 15              |
|--|------------|---------------------------|
| State  | Arizona    | Alabama:California        |
| Market area                                  | Peoria     | Yuma :Tuscaloosa: Brawley |
| Percentage of variety at gin                 | 90         | 95 : 95 : 100             |
| Period of harvest                            | Late       | Late : Late : Late        |
| RAW COTTON QUALITY                           |            |                           |
| Classification (official standards):         |            |                           |
| Grade-----designation:                       | M          | M : SIM : SIM             |
| Staple length-----inches:                    | 1-1/16     | 1-1/32 : 1-1/32 : 1-1/32  |
| Fiber length (Fibrograph):                   |            |                           |
| Upper half mean-----inches:                  | 1.06       | 1.04 : 1.00 : 1.00        |
| Uniformity-----ratio:                        | 77         | 77 : 78 : 78              |
| Fiber fineness and maturity:                 |            |                           |
| Micronaire-----reading <u>1</u> /:           | 4.2        | 4.2 : 4.2 : 4.6           |
| Fineness (Causticaire)---ug/inch <u>2</u> /: | 4.0        | 4.1 : 4.3 : 4.6           |
| Maturity ( " )-----index:                    | 80         | 78 : 77 : 80              |
| Fiber tensile strength (Pressley):           |            |                           |
| Zero gauge-----1,000 p.s.i.:                 | 93         | 94 : 76 : 86              |
| " " -----grams per tex <u>3</u> /:           | 46.0       | 46.5 : 37.9 : 42.6        |
| 1/8" " ----- " " " :                         | 24.4       | 24.4 : 20.4 : 22.0        |
| Nonlint content: <u>4</u> /                  |            |                           |
| Visible waste-----percent:                   | 1.9        | 1.5 : 2.9 : 1.3           |
| Invisible waste----- " :                     | 1.1        | 0.5 : 1.0 : 0.6           |
| Total nonlint content----- " :               | 3.0        | 2.0 : 3.9 : 1.9           |
| Color of raw cotton: <u>5</u> /              |            |                           |
| Reflectance-----Rd:                          | 75.4       | 74.6 : 71.5 : 77.4        |
| Yellowness-----+b:                           | 8.9        | 9.3 : 8.1 : 7.9           |
| Sugar content-----percent:                   | 0.2        | 0.3 : 0.0 : 0.1           |
| Acid-alkaline value-----pH units <u>6</u> /: | 7.0        | 6.6 : 8.3 : 7.0           |
| PROCESSING RESULTS                           |            |                           |
| Manufacturing waste:                         |            |                           |
| Picker and card-----percent:                 | 7.4        | 7.4 : 8.9 : 7.6           |
| Neps-----per 100 sq. in. of card web:        | 10         | 9 : 10 : 6                |
| Yarn skein strength:                         |            |                           |
| 22s (26.8 tex)-----pounds:                   | 125        | 125 : 109 : 112           |
| 50s (11.8 " )----- " :                       | 44         | 43 : 38 : 38              |
| Average break factor----- <u>7</u> /:        | 2475       | 2450 : 2149 : 2182        |
| Yarn appearance:                             |            |                           |
| 22s (26.8 tex)-----grade:                    | C+         | C : C+ : C+               |
| 50s (11.8 " )----- " :                       | D+         | D : C : C+                |
| Average yarn appearance----index <u>8</u> /: | 90         | 80 : 95 : 100             |

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For footnotes see page 11.



Table 2.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, crop of 1958--Continued

|                                       |   |              |   |             |   |                     |
|---------------------------------------|---|--------------|---|-------------|---|---------------------|
| Variety                               | : | Deltapine 15 |   |             |   |                     |
| State                                 | : | California   | : | Mississippi | : | Texas               |
| Market area                           | : | Westmorland  | : | Edwards     | : | Mt.Olive :Texarkana |
| Percentage of variety at gin          | : | 100          | : | 90          | : | 75 : 90             |
| Period of harvest                     | : | Late         | : | Late        | : | Late : Late         |
| RAW COTTON QUALITY                    |   |              |   |             |   |                     |
| Classification (official standards):  | : | :            | : | :           | : | :                   |
| Grade-----designation:                | : | M            | : | SIMltsp:    | : | SIMltsp: Mltsp      |
| Staple length-----inches:             | : | 1-1/32       | : | 1-1/32:     | : | 1 : 1-3/32          |
| Fiber length (Fibrograph):            | : | :            | : | :           | : | :                   |
| Upper half mean-----inches:           | : | 1.02         | : | 1.02        | : | .99 : 1.09          |
| Uniformity-----ratio:                 | : | 76           | : | 76          | : | 76 : 79             |
| Fiber fineness and maturity:          | : | :            | : | :           | : | :                   |
| Micronaire-----reading 1/:            | : | 4.6          | : | 4.9         | : | 4.7 : 3.8           |
| Fineness (Causticaire)---ug/inch 2/:  | : | 4.5          | : | 5.0         | : | 5.0 : 3.6           |
| Maturity ( " )-----index:             | : | 80           | : | 81          | : | 78 : 77             |
| Fiber tensile strength (Pressley):    | : | :            | : | :           | : | :                   |
| Zero gauge-----1,000 p.s.i.:          | : | 87           | : | 78          | : | 75 : 75             |
| " " -----grams per tex 3/:            | : | 43.1         | : | 38.6        | : | 37.1 : 37.1         |
| 1/8" " ----- " " " :                  | : | 22.5         | : | 19.4        | : | 19.7 : 21.0         |
| Nonlint content: 4/                   | : | :            | : | :           | : | :                   |
| Visible waste-----percent:            | : | 1.2          | : | 1.5         | : | 3.0 : 1.7           |
| Invisible waste----- "                | : | 1.1          | : | 1.5         | : | 2.5 : 1.3           |
| Total nonlint content----- "          | : | 2.3          | : | 3.0         | : | 5.5 : 3.0           |
| Color of raw cotton: 5/               | : | :            | : | :           | : | :                   |
| Reflectance-----Rd:                   | : | 77.0         | : | 67.4        | : | 67.5 : 76.5         |
| Yellowness-----+b:                    | : | 8.1          | : | 8.9         | : | 8.4 : 8.9           |
| Sugar content-----percent:            | : | 0.1          | : | 0.0         | : | 0.0 : 0.2           |
| Acid-alkaline value-----pH units 6/:  | : | 7.2          | : | 8.1         | : | 7.3 : 6.9           |
| PROCESSING RESULTS                    |   |              |   |             |   |                     |
| Manufacturing waste:                  | : | :            | : | :           | : | :                   |
| Picker and card-----percent:          | : | 7.4          | : | 8.4         | : | 11.1* : 8.2         |
| Neps-----per 100 sq. in. of card web: | : | 8            | : | 4           | : | 4 : 9               |
| Yarn skein strength:                  | : | :            | : | :           | : | :                   |
| 22s (26.8 tex)-----pounds:            | : | 115          | : | 92          | : | 97 : 115            |
| 50s (11.8 " )----- "                  | : | 40           | : | 32          | : | 34 : 41             |
| Average break factor-----7/:          | : | 2265         | : | 1812        | : | 1917 : 2290         |
| Yarn appearance:                      | : | :            | : | :           | : | :                   |
| 22s (26.8 tex)-----grade:             | : | B            | : | B           | : | B : C+              |
| 50s (11.8 " )----- "                  | : | C            | : | C+          | : | C+ : C              |
| Average yarn appearance----index 8/:  | : | 100          | : | 105         | : | 105 : 95            |

For footnotes see page 11.

\*Net weight fed picker less than five pounds, therefore waste results not considered reliable.

Table 3.--Results of classification, fiber tests, and carded and combed (in parentheses) yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 6-1/2 pounds per hour and a twist multiplier of 3.80, crop of 1958

|                                       |            |             |                      |                    |            |   |            |
|---------------------------------------|------------|-------------|----------------------|--------------------|------------|---|------------|
| Variety                               | :          | Acala 1517C | :                    | Arizona 44         |            |   |            |
| State                                 | :          | New Mexico  | :                    | Arizona            |            |   |            |
| Market area                           | :          | Dexter      | :Lake Arthur: Loving | : Marana           |            |   |            |
| Percentage of variety at gin          | :          | 88          | :                    | 90 : 92 : 80       |            |   |            |
| Period of harvest                     | :          | Late        | :                    | Late : Late : Late |            |   |            |
| RAW COTTON QUALITY                    |            |             |                      |                    |            |   |            |
| Classification (official standards):  | :          | :           | :                    | :                  |            |   |            |
| Grade-----designation:                | SIM        | :           | SIM                  | :                  | SIM        | : | M          |
| Staple length-----inches:             | 1-3/32     | :           | 1-1/16               | :                  | 1-1/8      | : | 1-1/16     |
| Fiber length (Fibrograph):            | :          | :           | :                    | :                  | :          | : | :          |
| Upper half mean-----inches:           | 1.12       | :           | 1.09                 | :                  | 1.14       | : | 1.07       |
| Uniformity-----ratio:                 | 77         | :           | 76                   | :                  | 77         | : | 78         |
| Fiber fineness and maturity:          | :          | :           | :                    | :                  | :          | : | :          |
| Micronaire-----reading 1/             | 3.6        | :           | 3.4                  | :                  | 3.8        | : | 4.1        |
| Fineness (Causticaire)---ug/inch 2/   | 3.6        | :           | 3.4                  | :                  | 3.9        | : | 4.1        |
| Maturity ( " )-----index:             | 75         | :           | 73                   | :                  | 76         | : | 78         |
| Fiber tensile strength (Pressley):    | :          | :           | :                    | :                  | :          | : | :          |
| Zero gauge-----1,000 p.s.i.           | 84         | :           | 85                   | :                  | 82         | : | 89         |
| " " -----grams per tex 3/             | 41.6       | :           | 41.9                 | :                  | 40.6       | : | 44.2       |
| 1/8" " ----- " " "                    | 24.6       | :           | 24.7                 | :                  | 23.7       | : | 23.7       |
| Nonlint content: 4/                   | :          | :           | :                    | :                  | :          | : | :          |
| Visible waste-----percent:            | 2.4        | :           | 1.3                  | :                  | 2.0        | : | 1.6        |
| Invisible waste----- "                | 1.4        | :           | 1.4                  | :                  | 0.6        | : | 1.1        |
| Total nonlint content----- "          | 3.8        | :           | 2.7                  | :                  | 2.6        | : | 2.7        |
| Color of raw cotton: 5/               | :          | :           | :                    | :                  | :          | : | :          |
| Reflectance-----Rd:                   | 78.5       | :           | 77.7                 | :                  | 73.7       | : | 76.5       |
| Yellowness-----+b:                    | 7.3        | :           | 7.6                  | :                  | 7.7        | : | 7.9        |
| Sugar content-----percent:            | 0.1        | :           | 0.2                  | :                  | 0.1        | : | 0.2        |
| Acid-alkaline value-----pH units 6/   | 8.0        | :           | 7.8                  | :                  | 8.7        | : | 6.8        |
| PROCESSING RESULTS                    |            |             |                      |                    |            |   |            |
| Manufacturing waste:                  | :          | :           | :                    | :                  | :          | : | :          |
| Picker and card-----percent:          | 8.9        | :           | 8.8                  | :                  | 7.8        | : | 8.1        |
| Comber----- "                         | 13.4       | :           | 14.1                 | :                  | 12.9       | : | 14.7       |
| Neps-----per 100 sq. in. of card web: | 21         | :           | 28                   | :                  | 12         | : | 17         |
| Yarn skein strength:                  | :          | :           | :                    | :                  | :          | : | :          |
| 22s (26.8 tex)-----pounds:            | 135( 146)  | :           | 132( 145)            | :                  | 133( 143)  | : | 126( 140)  |
| 50s (11.8 " )----- "                  | 48( 52)    | :           | 47( 52)              | :                  | 47( 51)    | : | 45( 50)    |
| Average break factor-----7/           | 2685(2906) | :           | 2627(2895)           | :                  | 2638(2848) | : | 2511(2790) |
| Yarn appearance:                      | :          | :           | :                    | :                  | :          | : | :          |
| 22s (26.8 tex)-----grade:             | D+(C)      | :           | D+(C)                | :                  | C+(B)      | : | C (C+)     |
| 50s (11.8 " )----- "                  | D+(C)      | :           | D (D+)               | :                  | C (C+)     | : | C (C)      |
| Average yarn appearance----index 8/   | 80(90)     | :           | 75(85)               | :                  | 95(105)    | : | 90(95)     |

For footnotes see page 11.

Table 4.--Results of classification, fiber tests, and combed yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 4-1/2 pounds per hour and a twist multiplier of 3.60, crop of 1958

| Variety                               | : | Pima S-1  | : |
|---------------------------------------|---|-----------|---|
| State                                 | : | Arizona   | : |
| Market area                           | : | Peoria    | : |
| Percentage of variety at gin          | : | Safford   | : |
| Period of harvest                     | : | Stanfield | : |
|                                       | : | 100       | : |
|                                       | : | Late      | : |
|                                       | : | Late      | : |
|                                       | : | Late      | : |
| RAW COTTON QUALITY                    | : |           | : |
| Classification (official standards):  | : |           | : |
| Grade-----designation:                | : |           | : |
| Staple length-----inches:             | : |           | : |
| Fiber length (array):                 | : |           | : |
| Upper quartile-----inches:            | : |           | : |
| Coefficient of variability--percent:  | : |           | : |
| Fiber fineness and maturity:          | : |           | : |
| Micronaire-----reading 1/:            | : |           | : |
| Fineness (Causticaire)---ug/inch 2/:  | : |           | : |
| Maturity ( " )-----index:             | : |           | : |
| Fiber tensile strength (Pressley):    | : |           | : |
| Zero gauge-----1,000 p.s.i.:          | : |           | : |
| " " -----grams per tex 3/:            | : |           | : |
| 1/8" " ----- " " " ":                 | : |           | : |
| Nonlint content: 4/                   | : |           | : |
| Visible waste-----percent:            | : |           | : |
| Invisible waste----- "                | : |           | : |
| Total nonlint content----- "          | : |           | : |
| Color of raw cotton: 5/               | : |           | : |
| Reflectance-----Rd:                   | : |           | : |
| Yellowness-----+b:                    | : |           | : |
| Sugar content-----percent:            | : |           | : |
| Acid-alkaline value-----pH units 6/:  | : |           | : |
| PROCESSING RESULTS                    | : |           | : |
| Manufacturing waste:                  | : |           | : |
| Picker and card-----percent:          | : |           | : |
| Comber----- "                         | : |           | : |
| Neps-----per 100 sq. in. of card web: | : |           | : |
| Yarn skein strength:                  | : |           | : |
| 50s (11.8 tex)-----pounds:            | : |           | : |
| 80s ( 7.4 " )----- "                  | : |           | : |
| Average break factor-----7/:          | : |           | : |
| Yarn appearance:                      | : |           | : |
| 50s (11.8 tex)-----grade:             | : |           | : |
| 80s ( 7.4 " )----- "                  | : |           | : |
| Average yarn appearance----index 8/:  | : |           | : |

Continued on page 10

For footnotes see page 11.



Table 4.--Results of classification, fiber tests, and combed yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 4-1/2 pounds per hour and a twist multiplier of 3.60, crop of 1958--Continued

|  |   |              |   |        |
|--|---|--------------|---|--------|
| Variety                                      | : | Pima S-1     | : |        |
| State  | : | New Mexico   | : | Texas  |
| Market area                                  | : | Mesilla Park | : | Fabens |
| Percentage of variety at gin                 | : | 95           | : | 95     |
| Period of harvest                            | : | Late         | : | Late   |
| RAW COTTON QUALITY                           |   |              |   |        |
| Classification (official standards):         | : |              | : |        |
| Grade-----designation:                       | : | 2            | : | 3      |
| Staple length-----inches:                    | : | 1-7/16       | : | 1-7/16 |
| Fiber length (array):                        | : |              | : |        |
| Upper quartile-----inches:                   | : | 1.40         | : | 1.41   |
| Coefficient of variability--percent:         | : | 30           | : | 28     |
| Fiber fineness and maturity:                 | : |              | : |        |
| Micronaire-----reading <u>1</u> /:           | : | 3.4          | : | 3.5    |
| Fineness (Causticaire)---ug/inch <u>2</u> /: | : | 3.1          | : | 3.0    |
| Maturity ( " )-----index:                    | : | 77           | : | 78     |
| Fiber tensile strength (Pressley):           | : |              | : |        |
| Zero gauge-----1,000 p.s.i.:                 | : | 94           | : | 95     |
| " " -----grams per tex <u>3</u> /:           | : | 46.6         | : | 47.2   |
| 1/8" " ----- " " " " :                       | : | 32.6         | : | 32.3   |
| Nonlint content: <u>4</u> /                  | : |              | : |        |
| Visible waste-----percent:                   | : | 0.8          | : | 1.5    |
| Invisible waste----- " :                     | : | 1.2          | : | 1.5    |
| Total nonlint content----- " :               | : | 2.0          | : | 3.0    |
| Color of raw cotton: <u>5</u> /              | : |              | : |        |
| Reflectance-----Rd:                          | : | 71.6         | : | 68.5   |
| Yellowness-----+b:                           | : | 10.7         | : | 11.0   |
| Sugar content-----percent:                   | : | 0.1          | : | 0.1    |
| Acid-alkaline value-----pH units <u>6</u> /: | : | 6.2          | : | 6.4    |
| PROCESSING RESULTS                           |   |              |   |        |
| Manufacturing waste:                         | : |              | : |        |
| Picker and card-----percent:                 | : | 10.9         | : | 9.7    |
| Comber----- " :                              | : | 13.3         | : | 19.2   |
| Neps-----per 100 sq. in. of card web:        | : | 13           | : | 22     |
| Yarn skein strength:                         | : |              | : |        |
| 50s (11.8 tex)-----pounds:                   | : | 68           | : | 69     |
| 80s ( 7.4 " )----- " :                       | : | 39           | : | 39     |
| Average break factor----- <u>7</u> /:        | : | 3260         | : | 3285   |
| Yarn appearance:                             | : |              | : |        |
| 50s (11.8 tex)-----grade:                    | : | C+           | : | C+     |
| 80s ( 7.4 " )----- " :                       | : | C            | : | C      |
| Average yarn appearance----index <u>8</u> /: | : | 95           | : | 95     |

For footnotes see page 11.

FOOTNOTES

- 1/ Fiber fineness and maturity in combination as measured on untreated samples using the cuvilinear scale for upland cotton.
- 2/ Fineness and maturity as determined by the Causticaire method using the Micronaire instrument.
- 3/ Tex is the universal unit for designating linear density of textile materials as adopted by the International Standards Organization (ISO). A tex unit equals the weight in grams of 1,000 meters of the material.
- 4/ As determined by means of the Shirley Analyzer.
- 5/ Determined by the Nickerson-Hunter Colorimeter on raw stock. Rd values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.
- 6/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation due to weathering or from the action of micro-organisms.
- 7/ Based on yarn skein strength (number x strength) of the two yarn numbers spun.
- 8/ Based on two numbers spun. Index of average quality equals 100.

UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON 25, D. C.

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